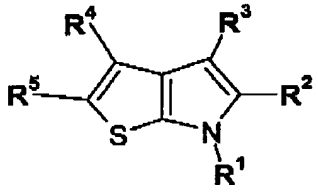
Application No. 10/524,978
Amendment Dated 02/16/2006
Reply to Office Action of 01/23/2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A compound of Formula (I),



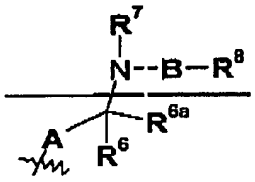
Formula (I)

wherein

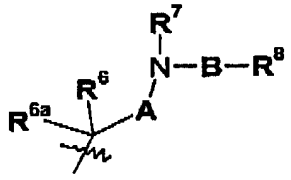
R^1 is selected from: hydrogen, optionally-substituted C_{1-6}alkyl, optionally substituted C_{1-6}alkanoyl, optionally substituted aryl or optionally-substituted arylC_{1-6}alkyl;

R^2 is an optionally-substituted mono or bi-cyclic aromatic ring;

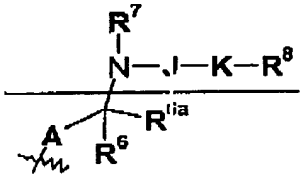
R^3 is a group of formula 'IIb)~~selected from a group of Formula (IIa) to Formula (IIf)~~:



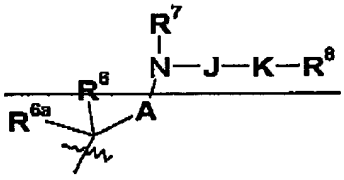
~~Formula (I a)~~



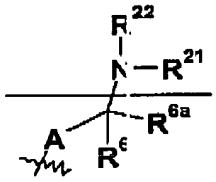
Formula (IIb)



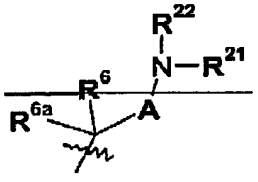
~~Formula (I c)~~



~~Formula (IId)~~



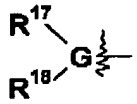
~~Formula (IIe)~~



~~Formula (IIf)~~

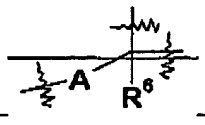
R^4 is selected from: hydrogen, optionally substituted C_{1-6}alkyl, optionally substituted aryl, C_{1-3}perfluoroalkyl, cyano, nitro, halo, $R^9O(CH_2)_m$-, $R^9C(O)N(R^{10})$-, $R^9R^{10}NC(O)N(R^{10})(CH_2)_n$-, $R^9S(O_n)(CH_2)_m$- or $R^9R^{10}NC(O)$-$(CR^9R^{10})_t(CH_2)_m$-;

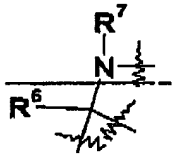
R^5 is a group of Formula (III):



Formula (III)

R^6 and R^{6a} are independently selected from hydrogen, fluoro, optionally substituted C_{1-6}alkyl, optionally-substituted aryl or optionally substituted arylC_{1-6}alkyl, or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbocyclic ring of 3-7 atoms, or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbonyl group;

~~or when A is not a direct bond the group~~  ~~forms a carbocyclic ring of 3-7 carbon atoms or a heterocyclic ring containing one or more heteroatoms;~~



~~or the group~~ ~~forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;~~

R^7 is selected from: hydrogen, optionally-substituted C_{1-6}alkyl, optionally-substituted arylC_{1-6}alkyl, optionally-substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylC_{1-6}alkyl, R^9OC_{1-6}alkyl-, $R^9R^{10}NC_{1-6}$alkyl-, $R^9R^{10}NC(O)C_{1-6}$alkyl, -$C(NR^9R^{10})$=NH;

~~or when R^3 is a group of Formula (IIc) or (IId) R^7 is of the formula -J-K-R^8;~~

R^8 is selected from:

(i) hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, haloC_{1-6}alkyl, C_{1-4}alkoxyC_{1-4}alkyl, hydroxy, hydroxyC_{1-6}alkyl, cyano, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, C_{1-6}alkyl-$S(O_n)$-, -O-R^b, -NR^bR^c, -C(O)-R^b, -C(O)O-R^b, -$CONR^bR^c$, -NH-C(O)-R^b or -$S(O_n)NR^bR^c$, where R^b and R^c are independently selected from hydrogen and C_{1-4}alkyl

optionally substituted with hydroxy, amino, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, HO-C_{2-4}alkyl-NH- or HO-C_{2-4}alkyl-N(C_{1-4}alkyl)-;

(ii) nitro when **B** is a group of Formula (IV) and **X** is CH and **p** is 0;

(iii) C_{3-7}cycloalkyl, aryl or arylC_{1-6}alkyl each of which is optionally substituted by R^{12}, R^{13} and R^{14};

(iv) -(Q)-aryl, -(Q)-heterocyclyl, -aryl-(Q)-aryl, each of which is optionally substituted by R^{12}, R^{13} and R^{14}
wherein -(Q)- is selected from **E**, **F** or a direct bond;

(v) heterocyclyl or heterocyclylC_{1-6}alkyl each of which is optionally substituted by up to 4 substituents independently selected from R^{12}, R^{13} and R^{14};

(vi) a group selected from R^{12}, R^{13} and R^{14};

R^9 and R^{10} are independently selected from: hydrogen, hydroxy, optionally substituted C_{1-6}alkyl, optionally substituted aryl, optionally substituted arylC_{1-6}alkyl, an optionally substituted carbocyclic ring of 3-7 atoms, optionally substituted heterocyclyl, optionally substituted heterocyclylC_{1-6}alkyl or R^9 and R^{10} taken together can form an optionally substituted ring of 3-9 atoms or R^9 and R^{10} taken together with the carbon atom to which they are attached form a carbonyl group;

R^{11} is selected from: hydrogen, optionally substituted C_{1-6}alkyl, or N(R^9R^{10});

R^{12} is selected from: hydrogen, hydroxy, $R^{17}R^{18}N(CH_2)_{cc}$-, $R^{17}R^{18}NC(O)(CH_2)_{cc}$-, optionally substituted C_{1-3}alkyl- $C(O)N(R^9)(CH_2)_{cc}$-, optionally substituted C_{1-6}alkyl-$SO_2N(R^9)$-, optionally substituted aryl-$SO_2N(R^9)$-, C_{1-3}perfluoroalkyl-$SO_2N(R^9)$-; optionally substituted C_{1-3}alkyl-$N(R^9)SO_2$-, optionally substituted aryl-$N(R^9)SO_2$-, C_{1-3}perfluoroalkyl-$N(R^9)SO_2$- optionally substituted C_{1-6}alkanoyl-$N(R^9)SO_2$-; optionally substituted aryl-$C(O)N(R^9)SO_2$-, optionally substituted C_{1-6}alkyl-$S(O_n)$ -, optionally substituted aryl-$S(O_n)$ - , C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxy, optionally substituted C_{1-6}alkoxy, carboxy, halo, nitro or cyano;

R^{13} and R^{14} are independently selected from: hydrogen, hydroxy, oxo, optionally substituted C_{1-6}alkyl, optionally substituted C_{1-6}alkanoyl, optionally substituted C_{2-6}alkenyl, cyano, nitro, C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxy, optionally substituted aryl, optionally substituted arylC_{1-6}alkyl, $R^9O(CH_2)_s$-, $R^9(O)O(CH_2)_s$-, $R^9OC(O)(CH_2)_s$-, $R^{16}S(O_n)(CH_2)_s$-, $R^9R^{10}NC(O)(CH_2)_s$- or halo;

R^{15} is selected from: hydrogen, optionally substituted C_{1-6}alkyl, $R^{19}OC(O)$-, $R^9R^{10}NC(O)$-, $R^9C(O)$-, $R^9S(O_n)$-;

R^{16} is selected from: hydrogen, C_{1-6}alkyl, C_{1-3}perfluoroalkyl or optionally-substituted aryl;

R^{17} is independently selected from: hydrogen, hydroxy, cyano or optionally substituted C_{1-6}alkyl;

R^{18} is a group of formula R^{18a}-$C(R^9R^{10})_{0-1}$- wherein R^{18a} is selected from: $R^{19}OC(O)$-, $R^9R^{10}NC(O)$-, $R^9R^{10}N$-, $R^9C(O)$-, $R^9C(O)N(R^{10})$-, $R^9R^{10}NC(O)$-, $R^9R^{10}NC(O)N(R^{10})$-, $R^9SO_2N(R^{10})$-, $R^9R^{10}NSO_2N(R^{10})$-, $R^9C(O)O$-, $R^9OC(O)$-, $R^9R^{10}NC(O)O$-, R^9O-, $R^9S(O_n)$-, $R^9R^{10}NS(O_n)$ -, hydrogen, optionally substituted C_{1-6}alkyl, optionally substituted heterocyclyl;

or R^{17} and R^{18} when taken together form an optionally substituted carbocyclic ring of 3-7 atoms or optionally substituted heterocyclyl;

R^{19} is selected from: hydrogen, optionally substituted C_{1-6}alky, optionally substituted aryl, optionally substituted arylC_{1-6}alkyl, optionally substituted C_{3-7}cycloalkyl, optionally substituted heterocyclyl or optionally substituted heterocyclylC_{1-6}alkyl;

R^{20} is selected from R^{12} or R^{13};

~~R^{21} and R^{22} are independently selected from hydrogen, optionally substituted C_{1-6}alkyl, optionally substituted C_{3-7}cycloalkyl, optionally substituted heterocyclyl, optionally substituted heterocyclylC_{1-6}alkyl, optionally substituted C_{2-6}alkenyl, optionally substituted C_{2-6}alkynyl, $-(C_{1-6}alkyl)_{aa}-S(O_n)-(C_{1-6}alkyl)_{bb}$-; $R^9R^{10}NC_{2-6}$alkyl, R^9OC_{2-6}alkyl or $R^9R^{10}NC(O)C_{2-6}$alkyl, with the proviso that R^9 and R^{10} independently or taken together are not optionally substituted aryl or optionally substituted arylC_{1-6}alkyl; or R^{21} and R^{22} taken together form an optionally substituted non-aromatic heterocyclic ring;~~

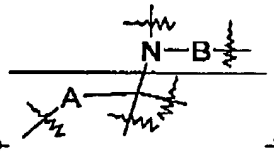
A is selected from:

(i) a direct bond;

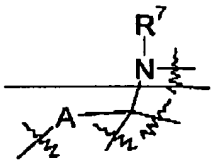
(ii) optionally-substituted C_{1-5}alkylene wherein the optional substituents are independently selected from: optionally-substituted C_{1-6}alkyl optionally-substituted aryl, optionally substituted arylC_{1-6}alkyl or substituted arylC_{1-6}alkyl;

(iii) a carbocyclic ring of 3-7 atoms;

(iv) a carbonyl group or $-C(O)-C(R^dR^d)$-, wherein R^d is independently selected from hydrogen and C_{1-2}alkyl;



~~or when R^3 is a group of Formula (IIa) or (IIb), the group forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;~~

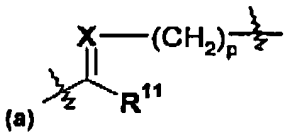


~~or when R^3 is a group of Formula (IIa), (IIb), (IIc) or (IId), the group forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;~~

B is selected from:

(i) a direct bond;

(ii) a group of Formula (IV)



Formula (IV)

wherein:

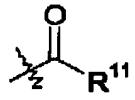
X is selected from N, CH or a saturated heterocyclic ring,

wherein at position (a) Formula (IV) is attached to the nitrogen atom and the $(CH_2)p$ group is attached to R^8; and

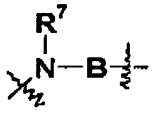
(iii) a group independently selected from: optionally substituted C_{1-6}alkylene, optionally substituted C_{3-7}cycloalkyl, optionally substituted C_{3-6}alkenylene, optionally substituted C_{3-6}alkynyl, C_{1-6}alkoxy, $(C_{1-5}alkyl)_{aa}$-$S(O_n)$-$(C_{1-5}alkyl)_{bb}$-, $(C_{1-5}alkyl)_{aa}$-O-$(C_{1-5}alkyl)_{bb}$- or $(C_{1-5}alkyl)_{aa}$-$N(R^{15})$-$(C_{1-5}alkyl)_{bb}$,

wherein R^{15} and the $(C_{1-5}alkyl)_{aa}$ or $(C_{1-5}alkyl)_{bb}$ chain can be joined to form a ring;

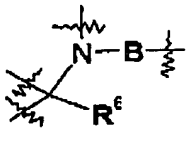
or the group –B-R^8 represents a group of Formula (V)



Formula (V);



or the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms;



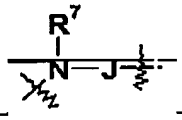
or the group forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

E is –O-, -S(O_n), -C(O)-, -NR^{15}- or -C(R^9R^{10})$_q$;

F is -E(CH_2)$_r$- or -(CH_2)$_r$E -;

G is selected from: hydrogen, halo, CN, NO_2, N, O, S(O_n), C(O), C(R^9R^{10})$_t$, optionally substituted C_{2-6}akenylene, optionally substituted C_{2-6}alkynylene, optionally substituted heterocyclyl or a direct bond to R^{18},

~~**J** is a group of the formula: -(CH_2)$_s$-**L**-(CH_2)$_s$- wherein when s is greater than 0, the alkylene group is optionally substituted,~~



~~or the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms;~~

~~**K** is selected from: a direct bond, -(CH_2)$_{s1}$-, -(CH_2)$_{s2}$-O-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$C(O)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-S(O_n)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-N(R^{18})-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-C(O)N(R^9)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-N(R^9)C(O)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-N(R^9)C(O)N(R^9)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-OC(O)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-C(O)O-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-N(R^9)C(O)O-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-OC(O)N(R^9)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-OS(O_n)-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-S(O_n)-O-(CH_2)$_{s2}$-, -(CH_2)$_{s1}$-S(O)$_2$N(R^9)-(CH_2)$_{s2}$-, or -(CH_2)$_{s1}$-N(R^9)S(O)$_2$-(CH_2)$_{s2}$-; wherein the -(CH_2)$_{s1}$- and -(CH_2)$_{s2}$- groups are independently optionally substituted by hydroxy or C_{1-4}alkyl;~~

~~**L** is selected from optionally substituted aryl or optionally substituted heterocyclyl;~~

m is an integer from 0 to 4;

n is an integer from 0 to 2;

p is an integer from 0 to 4;

q is an integer from 0 to 4;

r is an integer from 0 to 4;

s is an integer from 0 to 4;

~~**s1** and **s2** are independently selected from an integer from 0 to 4, and **s1+s2** is less than or equal to 4; and~~

t is an integer from 0 to 4;

aa and **bb** are independently selected from 0 or 1

cc is an integer between 0 to 2;

with the proviso that

(i) when G is hydrogen, halo, CN or NO_2 then R^{17} and R^{18} are both absent;

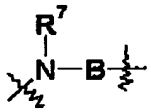
(ii) when G is O, $S(O_n)$, C(O) or $C(R^{11}R^{12})_t$ then G is substituted by a single group independently selected from the definition of R^{17} or R^{18} and when G is a direct bond to R^{18} then G is substituted by a single group selected from R^{18}; and

(iii) when ~~R^3 is a group of Formula (IIb), B~~ is a group of Formula (IV), R^8 is selected from group (i) or (ii) above, R^{11} is a group of the formula $N(R^{10}R^{11})$ and R^1, R^2 and R^5 are as defined above then R^4 cannot be hydrogen;

or a salt, pro-drug or solvate thereof.

2. (Original) A compound according to Claim 1 wherein R^1 is hydrogen.

3. (Cancelled)

4. (Original) A compound according to Claim 3 wherein B is optionally substituted C_{1-6}alkylene or the group  forms an optionally substituted C_{5-7}heterocyclic ring.

5-7. (Cancelled)

8. (Currently amended) A compound according to claim 3 wherein R^8 is selected from

~~Preferably R^8 is selected from~~

(i) hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, haloC_{1-6}alkyl, hydroxy, cyano, C_{1-6}alkyl$S(O_n)$-, -O-R^b, C_{1-4}alkoxyC_{1-4}alkyl, -C(O)-R^b, C(O)O-R^b, -NH-C(O)-R^b, N,N-di-C_{1-4}alkylamino, -$S(O_n)NR^bR^c$

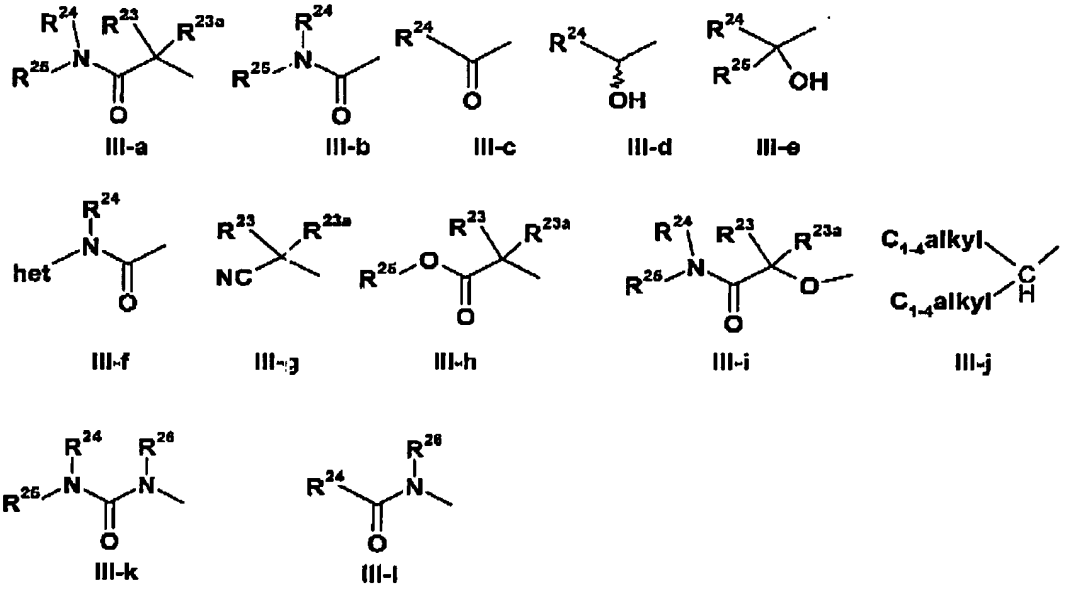
where R^b and R^c are independently selected from hydrogen and C_{1-6}alkyl, and n is 0, 1 or 2;

(ii) -(Q)-aryl;

(iii) C_{4-7}heterocyclyl, or

(iv) C_{3-7}carbocyclyl.

9. (Currently amended) A compound according to claim 1 wherein R^5 is a group of Formula (III) wherein the group of Formula (III) is selected from one of **III-a** to **III-l**;



wherein:

het represents an optionally substituted 3- to 8- membered heterocyclic ring containing from 1 to 4 heteroatoms independently selected from O, N and S;

R^{23} and R^{23a} are independently selected from hydrogen, fluoro or optionally substituted C_{1-8}alkyl; or R^{23} and R^{23a} together with the carbon to which they are attached form an optionally substituted 3 to 7-membered cycloalkyl ring;

R^{24} is selected from hydrogen, optionally substituted C_{1-8}alkyl, optionally substituted aryl, $-R^d$-Ar, where R^d represents C_{1-8}alkylene and Ar represents optionally substituted aryl, and optionally substituted 3- to 8- membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S;

R^{25} is selected from hydrogen; optionally substituted C_{1-8}alkyl and optionally substituted aryl;

or where the group of Formula (III) represents a group of Formula **III-a** , **III-b** or **III-i**, then the group $NR^{24}(-R^{25})$ represents an optionally substituted 3- to 8- membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S;

or where the group of Formula (III) represents structure III-e, R^{24} and R^{25} together with the carbon to which they are attached represents an optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 4 heteroatoms independently selected from O, N and S;
R^{26} is selected from hydrogen or C_{1-4}alkyl.

10. (Previously presented) A compound according to claim 1 wherein R^2 is selected from an optionally substituted monocyclic aromatic ring structure wherein the optional substituents are selected from cyano, NR^eR^f, optionally substituted C_{1-6}alkyl, optionally substituted C_{1-6}alkoxy or halo wherein R^e and R^f are independently selected from hydrogen, C_{1-6}alkyl or aryl.

11. (Currently amended) A compound selected from:
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[1-oxo-2-methyl-2-[4-(1,1-dioxidotetrahydro-3-thienyl)piperazin-1-yl]ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;~~
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-[4-(pyrrolidin-1-ylcarbonylmethyl)piperazin-1-yl]ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;~~
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-[4-(2,4-dioxo-1,2,3,4-tetrahydropyrimidin-6-ylmethyl)piperazin-1-yl]ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;~~
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-[3-hydroxypyrrolidin-1-ylcarbonyl]piperidin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;~~
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-[3-oxo-3-pyrrolidin-1-ylprop-2-yl]piperazin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole; and~~
~~2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-[morpholinocarbonyl]piperidin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;~~
{(2*S*)-2-[2-[2-(7-azabicyclo[2.2.1]hept-7-yl)-1,1-dimethyl-2-oxoethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrol-4-yl]propyl}(2-pyridin-4-ylethyl)amine;

2-[2-(7-azabicyclo[2.2.1]hept-7-yl)-1,1-dimethyl-2-oxoethyl]-5-(3,5-dimethylphenyl)-4-[2-(3-pyridin-4-ylpyrrolidin-1-yl)ethyl]-6*H*-thieno[2,3-*b*]pyrrole;
2-[1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl]-4-[2-(4-pyrid-4-ylpiperidin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole; and
2-[1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl]-4-[2-{4-(1,1-dioxidotetrahydrothien-3-yl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole
or a salt, pro-drug or solvate thereof.

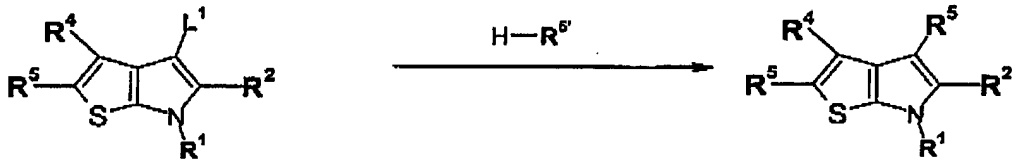
12. (Cancelled)

13. (Previously presented) A pharmaceutical formulation comprising a compound, or salt, pro-drug or solvate thereof, according to claim 1 and a pharmaceutically acceptable diluent or carrier.

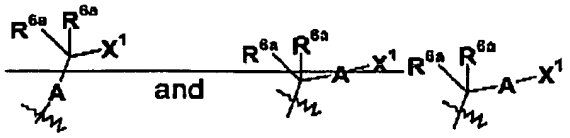
14. (Previously presented) A method of treating and/or preventing a sex hormone related condition in a patient comprising administering a compound according to claim 1, or salt, pro-drug or solvate thereof, to a patient.

15. (Currently amended) A process of producing a compound, or salt, pro-drug or solvate thereof, according to claim 1, wherein the process comprises a reaction step selected from any one of (a) to (e[[i]]):-

(a) Reaction of a compound of formula **XXXII** with a compound of formula H-$R^{5'}$ to form a compound of Formula (I),

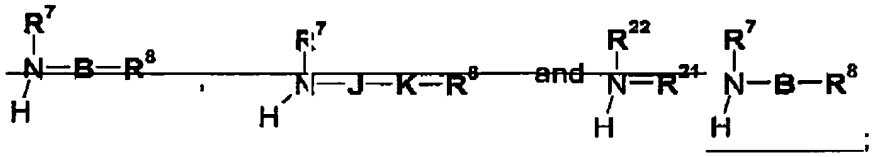


XXXII **Formula (I)**



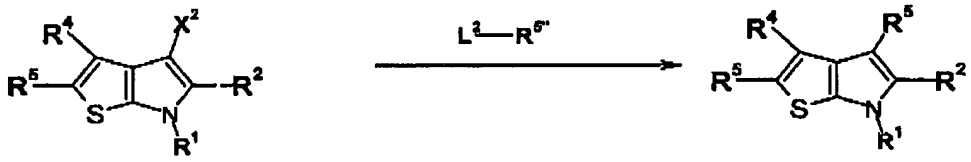
wherein L^1 is selected from: _____; X^1 is a displaceable group; and

$H\text{-}R^{6a}$ is selected from:

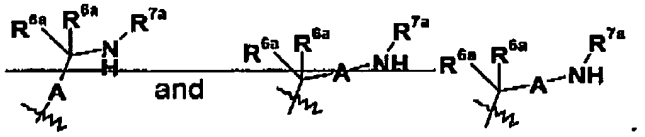


_____;

(b) Reaction of a compound of formula **XXXIII** with a compound of formula $L^2\text{-}R^{6a}$ to form a compound of Formula (I),



XXXIII **Formula (I)**



wherein X^2 is selected from: _____;

R^{7a} is selected from the definition of R^7 ~~or R^{22}~~ above, and

$L^2\text{-}R^{6a}$ is selected from:

~~$L^2\text{-}B\text{-}R^8$, $L^2\text{-}J\text{-}K\text{-}R^8$ and $L^2\text{-}R^{21}$~~ $L^2\text{-}B\text{-}R^8$;

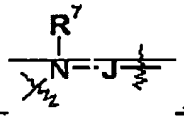
(c) For compounds of Formula (I) wherein ~~R^3 is a group of Formula (IIa), (IIb), (IIc) or (IId) and~~ R^7 is other than part of a heterocyclic ring or hydrogen, reaction of a compound of Formula (I) wherein ~~R^3 is a group of Formula (IIa), (IIb), (IIc) or (IId) and~~ R^7 is hydrogen with a group of formula $L^3\text{-}R^{7a}$, wherein R^{7a} is as defined above for R^7 with the exclusion of hydrogen and L^3 is a displaceable group;

~~(d) For compounds of Formula (I) wherein R^3 is a group of Formula (IIe) or (IIf) and R^{24} is other than hydrogen, reaction of a compound of Formula (I) wherein R^3 is a group of Formula (IIe) or (IIf) and R^{24} is hydrogen with a group of formula $L^4\text{-}R^{24a}$,~~

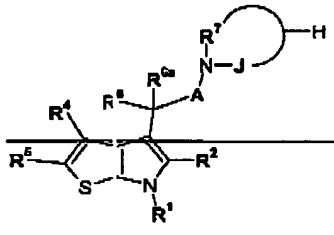
~~wherein R^{21a} is as defined above for R^{21} with the exclusion of hydrogen and L^4 is a displaceable group;~~

~~(e) For compounds of Formula (I) wherein R^3 is a group of Formula (IIe) or (IIf) and R^{22} is other than hydrogen, reaction of a compound of Formula (I) wherein R^3 is a group of Formula (IIe) or (IIf) and R^{22} is hydrogen with a group of formula L^5-R^{22a}, wherein R^{22a} is as defined above for R^{22} with the exclusion of hydrogen and L^6 is a displaceable group;~~

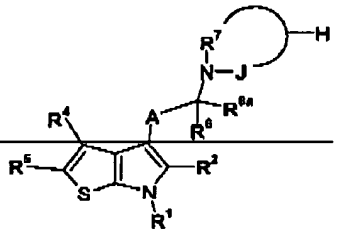
~~(f) For compounds of Formula (I) wherein R^3 is a group of Formula (IIc) or (IId) and~~



~~the group~~ ~~together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, reaction of a compound of Formula XXXIVa or XXXIVb, with a compound of Formula L^6-K-R^6, wherein L^6 is a displaceable group~~

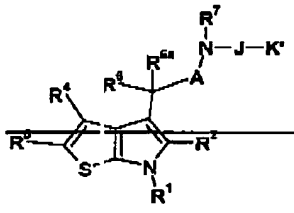


XXXIVa

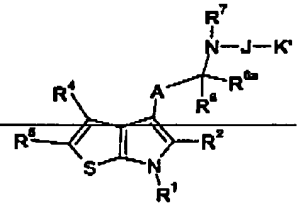


XXXIVb

~~(g) For compounds of Formula (I) wherein R^3 is a group of Formula (IIc) or (IId), reaction of a compound of Formula XXXVa or XXXVb, with a compound of Formula L^7-K''-$R^{6'}$, wherein L7 is a displaceable group, and wherein the groups K' and K'' comprise groups which when reacted together form K,~~

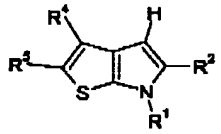


XXXVa



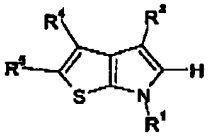
XXXVb

(d)[[h]] reaction of a compound of Formula XXXVI with an electrophillic compound of the formula L^8-R^5 , wherein L^8 is a displaceable group



XXXVI

(e[[i]]) reaction of a compound of Formula XXXVII with a compound of the formula L^8-R^5, wherein L^8 is a displaceable group



XXXVII ;

and thereafter if necessary:

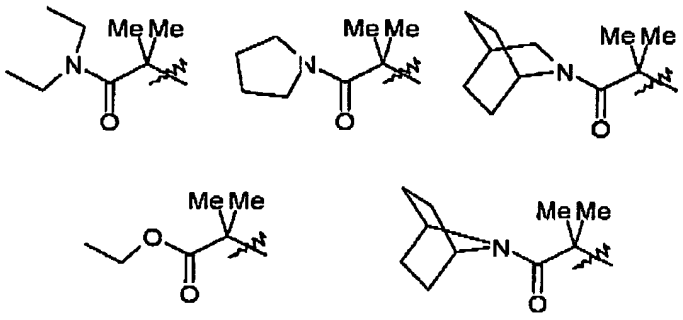
i) converting a compound of the Formula (I) into another compound of the Formula (I);

ii) removing any protecting groups;

iii) forming a salt, pro-drug or solvate.

16. (new) A compound according to claim 1 wherein R^4 is selected from hydrogen or C_{1-4}alkyl.

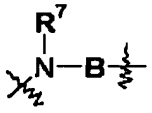
17. (new) A compound according to claim 9 wherein R^5 is selected from one of the following groups:



wherein Me represents methyl.

18. (new) A compound according to claim 10 wherein R^2 is selected from an optionally substituted monocyclic aromatic ring structure wherein the optional substituents are selected from methyl, F or Cl.

19. (new) A compound according to claim 1 wherein **A** is selected from a direct bond, C_{1-5}alkylene optionally substituted with C_{1-4}alkyl, carbonyl or carbonylmethyl.

20. (new) A compound according to claim 1 wherein **B** is unsubstituted C_{1-6}alkylene or the group  forms an optionally substituted saturated C_{4-7}heterocyclic ring selected from: azetidinyl, pyrrolidinyl, pyrazolinyl, pyrazolidinyl, imidazolinyl, imidazolidinyl, piperidiny , piperazinyl, hexahydropyrimidinyl, hexahydropyridazinyl, hexahydrotriazinyl, tetrahydrotriazinyl, dihydrotriazinyl, morpholinyl, thiomorpholinyl, thiazinanyl, thiazolidinyl, 1,5-dioxa-9-azaspiro[5.5]undecanyl or octahydropyrrolopyrrolyl, wherein the optional substituents are selected from. cyano, hydroxy, oxo, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}alkanoyl, $R^9OC(O)(CH_2)_w$-, $R^9R^{10}NC(O)(CH_2)_w$- or halo, wherein w is an integer between 0 and 4 and R^9 and R^{10} are as defined in Claim 1.

21. (new) A compound according to claim 1 wherein R^6 and R^{6a} are independently selected from hydrogen or unsubstituted C_{1-6}alkyl.

22. (new) A compound according to claim 1 wherein R^7 is selected from hydrogen or C_{1-4}alkyl.

23. (new) A compound according to claim 1 wherein R^8 is selected from

(i) hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, haloC_{1-6}alkyl, hydroxy, cyano, C_{1-6}alkyl$S(O_n)$-, -O-R^b, C_{1-4}alkoxyC_{1-4}alkyl, -C(O)-R^b, C(O)O-R^b, -NH-C(O)-R^b, N,N-di-C_{1-4}alkylamino, -$S(O_n)NR^bR^c$

where R^b and R^c are independently selected from hydrogen and C_{1-6}alkyl, and **n** is 0, 1 or 2;

(ii) -(Q)-aryl, wherein aryl is optionally substituted;

(iii) optionally substituted C_{4-7}heterocyclyl selected from: azirinyl, azetidinyl, pyrrolidinyl, pyrazolinyl, pyrazolidinyl, imidazolinyl, imidazolidinyl, piperidinyl, piperazinyl, hexahydropyrimidinyl, hexahydropyridazinyl, hexahydrotriazinyl, tetraydrotriazinyl, dihydrotriazinyl, tetrahydrofuranyl, dioxolanyl, tetrahydropyranyl, dioxanyl, trioxanyl, tetrahydrothienyl, 1-oxotetrahydrothienyl, 1,1-dioxotetrahydrothienyl tetrahydrothiopyran, 1-oxotetrahydrothiopyran, 1,1-dioxotetrahydrothiopyran, dithianyl, trithianyl, morpholinyl, oxathiolanyl, oxathianyl, thiomorpholinyl, thiazinanyl, 1-oxo-thiomorpholinyl, 1,1-dioxo-thiomorpholinyl, thiazolidinyl, pyrrolyl, imidazolyl, triazolyl, pyridyl, pyrimidinyl, pyrazinyl, pyridazinyl, triazinyl, thiazolyl, thiadiazolyl, thiadiazinyl, oxazolyl, isoxazolyl, oxadiazolyl, furazanyl, octahydropyrrolopyrrolyl, octahydropyrrolopyrrolyl,benzotriazolyl, dihydrobenzotriazolyl, indolyl, indolinyl, benzimidazolyl, 2,3-dihydrobenzimidazoly, benzotriazolyl 2,3-dihydro benzotriazolyl quinolinyl, isoquinolinyl, cinnolinyl, phthalazinyl, quinazolinyl, quinozalinyl, naphthyridinyl, pteridinyl, benzodioxolyl, tetrahydrodioxolopyrrolyl, 1,5-dioxa-9-azaspiro[5.5]undecanyl and 8-oxa-3-azabicyclooctanyl; or

(iv) optionally substituted C_{3-7}carbocyclyl;